




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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,968	09/11/2003	David M. Haaland	6969.2/103411	8987
20567	7590	05/04/2004	EXAMINER	
SANDIA CORPORATION			LE, JOHN H	
P O BOX 5800			ART UNIT	
MS-0161			PAPER NUMBER	
ALBUQUERQUE, NM 87185-0161			2863	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/661,968	Applicant(s) HAALAND ET AL.	
	Examiner John H Le	Art Unit 2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-86 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 25-86 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

El ction/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims 25-34, drawn to a method for analyzing multivariate spectral data, classified in class 702, subclass 23.
- II. Claims 35-38, drawn to a method of multivariate spectral analysis, classified in class 702, subclass 24.
- III. Claims 39-50, 75-86 drawn to a method of multivariate spectral analysis, classified in class 702, subclass 27.
- IV. Claims 51-62, drawn to a method of multivariate spectral analysis, classified in class 702, subclass 26.
- V. Claims 63-74, drawn to a method of multivariate spectral analysis, classified in class 702, subclass 25.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions such as inventions of group I and group II have different functions.

Inventions I and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each

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other if they are shown to be separately usable. In the instant case, invention I has separate utility such as invention of group I does not required step b) decomposing the spectral error covariance E_A according to $E_A = TP + E$, where T is a set of $n \times p$ loading vectors obtained from factor analysis of the spectral error covariance E_A , and E is a set of $n \times p$ random errors and spectral variations not useful for prediction of group III and invention of group III does not required step iv) obtaining component residuals E_c according to $E_c = C - C$ of group I. See MPEP § 806.05(d).

Inventions I and IV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as invention of group I does not required step b) decomposing the spectral error covariance E_A according to $E_A = TP + E$, where T is a set of $n \times p$ loading vectors obtained from factor analysis of the spectral error covariance E_A , and E is a set of $n \times p$ random errors and spectral variations not useful for prediction of group IV and invention of group IV does not required step iv) obtaining component residuals E_c according to $E_c = C - C$ of group I. See MPEP § 806.05(d).

Inventions I and V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as invention of group I does not required step b) decomposing the spectral error covariance E_A according to $E_A = TP + E$, where T

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is a set of $n \times p$ loading vectors obtained from factor analysis of the spectral error covariance E_A , and E is a set of $n \times p$ random errors and spectral variations not useful for prediction of group V and invention of group V does not required step iv) obtaining component residuals E_c according to $E_c = C - C$ of group I. See MPEP § 806.05(d).

Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions such as inventions of group II and group III have different functions.

Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions such as inventions of group II and group IV have different functions.

Inventions II and V are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions such as inventions of group II and group V have different functions.

Inventions III and IV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III

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has separate utility such as invention of group III does not required step d) augmenting the pure-component spectra K with at least one vector of the P loading vector to obtain first augmented pure-component spectra K of group IV and invention of group IV does not required step e) augmenting the set of predicted component values C with at least one vector of T scores to obtain a first set of augmented component values C of group III. See MPEP § 806.05(d).

Inventions III and V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III has separate utility such as invention of group III does not required step e) augmenting the pure-component spectra K with at least one vector of the P loading vector to obtain first augmented pure-component spectra K of group V and invention of group V does not required step e) augmenting the set of predicted component values C with at least one vector of T scores to obtain a first set of augmented component values C of group III. See MPEP § 806.05(d).

Inventions IV and V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention IV has separate utility such as invention of group IV does not required step c) guessing a set of component values C for the set of multivariate spectral data A of group V and invention of group V does not required step c) guessing pure-component spectra K for the set of multivariate spectral data A of group IV. See MPEP § 806.05(d).

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3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. A telephone call was made to Attorney Kevin W. Bieg on 04/22/2004 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

April 22, 2004



John Barlow
Supervisory Patent Examiner
Technology Center 2800